

F. No. J-11011/396/2012- IA II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road,
New Delhi -110003

E-mail : Ik.bokolia@nic.in
Telefax : 011-24695313
Dated 3rd July, 2015

To,

Shri C. Narayanan
Chief Manager Engg.(Pipeline Projects)
M/s Bharat Petroleum Corp. Ltd.
Plot A 5&6, SECTOR-1 , Noida.201 301

E-mail: narayanan@bharatpetroleum.in ; Fax No.- 97-2717-661106

Subject: Proposed LPG Pipeline (199 Km) from Kochi Refinery to Kerala Border (near Pallakad) at District Ernakulam, Kerala by M/s BPCL. - Environmental Clearance reg.

Ref.: Your letter no. REF/KCL/MoEF/02 dated 5th September, 2014.

Sir,

This reference to your letter dated 5th September, 2014 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report, public hearing report and subsequent submission of additional information vide letters dated 1st December, 2014 and 25th March, 2015 regarding above mentioned project.

2.0 The Ministry of Environment, Forest and Climate Change has examined the application. It is noted that proposal is for laying of LPG Pipeline from Kochi Refinery to Coimbatore at District Ernakulam, Kerala by M/s BPCL. Pipeline passes through different districts of Kerala (approx. 199 Km) and Tamil Nadu (approx. 39 Km) between take off and terminal point. Transportation of LPG gas through underground pipeline to the bottling terminals. Transportation and distribution of max. 1.53 MMTPA (including 25 % additional requirement as per regulations) of LPG from Kochi Refinery to Coimbatore. The flow-rate of LPG will be 328 m³/h. Length of the 12" NB pipeline between takeoff and terminal point of proposed pipeline is 238 km. there will be 3 Nos. mounded storage vessels of capacity 2000 MT each (total 6000 MT) at Coimbatore. Installation of LPG loading facility shall be at Coimbatore. The proposed pipeline passes through various forest stretch for total 1.285 km length in Thrissur district of Kerala state which comprises of reserved forest (Eucalyptus plantation), Kodumbankunnu Reserved Forest and Reserved Forest (Fairly Dense Mixed Jungle) for the length of 0.385 km, 0.368 km & 0.532 km length respectively. The pipeline route acquired total area in forest land is 12849.10 sq. m i.e. 1.2849 ha. BPCL has already obtained for clearance of forest land and stage -1 clearance vide MoEF letter no. 4-KLB998/2014-BAN/4768 dated 31st January, 2014 for diversion of 1.441 ha of forest land. BPCL has also applied for wildlife board clearance as the project is passing at about 5.3 Km distance of Peechi-Vazhani Wildlife Sanctuary. Total cost of project is Rs. 623 Crore. Following facilities to be created :

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- i. Dispatch terminal at Koch Refinery with pumping capacity vary from 0.5 MMTPA to 1.53 MMTPA.
- ii. Laying 12" dia pipeline, approx. 238 Km, long from KRL, Ambalmugal, Kochi terminal to BPCL's proposed new LPG loading gantry /bottling plant at Coimbatore, Tamil Nadu.
- iii. Installation of 3 Tap off points from mainline along with connectivity by pipeline to (i) IOCL's bottling plant, Udayaperoor, near Kochi Refinery (ii) HPCL's LPG Bottling plant located near Kanjokode, Palaghat in Kerala (near SV-19, Ch 182 Km) and (iii) ICOL's bottling plant at Coimbatore in Tamil Nadu.
- iv. Intermediate Pigging Station shall consist of Scrapper Launcher & Scrapper Receiver and Flare System.

3.0 M/s BPCL vide letter E&P.CCPL.MoEF.1 dated 5th March, 2015 has informed that they have approached Tamil Nadu Pollution Control Board for expediting the public hearing. However, they were given to understand that unless they get a formal direction from Tamil Nadu Government about laying of cross country pipelines, which is a policy matter of the Government, they will not in a position to allot public hearing date. Since they were uncertain about when the issue will be cleared by Tamil Nadu Government. BPCL has started looking for alternate land close to Kerala/ Tamil Nadu Border and was able to locate one in the Industrial Estate at Kanchikode, Palakkad, Kerala so as to meet its urgent requirement of evacuation of additional LPG post KR expansion which is progressing on schedule. Now, BPCL has requested for reconsideration of EC proposal delinking Tamil Nadu portion. Tamil Nadu portion of the line will be taken up as when we receive clearance from the Government about the routing of the pipeline.

4.0 Pipeline crosses various rivers namely Periyar, Chalakudi, Manali, Mangalam, Gayatri, Kannadi, Koraiyar, Valayar & Kummattipatti. For crossing the major rivers, pipeline shall be installed 2.5 m below scour depth. The pipeline shall be laid underground with minimum 1.2 m cover in normal stretches, additional cover, wherever required, shall be provided depending upon the type of crossings and as per statutory requirements. Stack height and acoustic enclosure for DG will be provided as per CPCB guidelines.

5.0 Public hearing/consultation was conducted by the Kerala State Pollution Control Board on 18.04.2014 for Thrissur District; on 21.05.2014 for Palakkad District; on 22.05.2014 for Kakkannad, Kochi District.

6.0 Oil and Gas transportation pipeline (crude and refinery/petrochemical products), passing through national parks/sanctuaries./coral reefs /ecologically sensitive areas including LNG Terminal is listed at S.N. 6(a) under category 'A' and appraised at Central level.

7.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 10th, 24th and 38th meetings held during 29th – 31st July, 2013, 29th – 30th September, 2014 and 20th-21st April, 2015 respectively. Project Proponent and the EIA Consultant namely MECON Limited have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

8.0 Based on the information submitted by the project proponent, the Ministry of Environment and Forest hereby accords environmental clearance to above project under

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the provisions of EIA Notification dated 14th September 2006, subject to the compliance of the following Specific and General Conditions:

A. SPECIFIC CONDITIONS:

- i) Environmental Clearance has been granted for laying of LPG pipeline (199 Km) for Kerala State. In future, in case of change in the scope of the project, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- ii) Prior clearance under the Wildlife (Protection) Act, 1972, shall be obtained from the Standing Committee of the National Board for Wildlife as the pipeline project passes through Eco-sensitive Zone of Peech-Vazhani Wildlife Sanctuary.
- iii) Forest clearance for the forest land involved in the pipeline project shall be obtained.
- iv) The project authority i.e. M/s BPCL shall ensure restoration of the Right of Way to preconstruction level as soon as construction activity completed. To ensure prevention of soil erosion, backfilled areas should be properly compacted.
- v) The design, material of construction, assembly, inspection, testing and safety aspects of operation and maintenance of pipeline and transporting the natural gas shall be governed by ASME/ANSI B 31.8/B31.4 and OISD standard 141.
- vi) Annual safety audit shall be carried out for the initial three years by an independent agency and report submitted to this Ministry for ensuring the strict compliance of safety regulations on operation and maintenance.
- vii) The construction of pipeline particularly at the river and stream crossing shall be done during dry seasons to avoid disturbance of breeding seasons and soil erosion. The riverbed, embankments and / dykes shall be restored adequately after installation of crossings.
- viii) Pipeline wall thickness and minimum depth of burial at river crossings and casings at rails, major road crossings shall be in conformity with ANSI/ASME requirements.
- ix) The company shall follow horizontal drilling technique for laying of pipeline while passing through major rivers.
- x) The project authorities shall install SCADA system with dedicated optical fiber based telecommunication link for safe operation of pipeline and Leak Detection System. Additional sectionalizing valves in the residential areas and sensitive location shall be provided to prevent the leaking of gas going to the atmosphere in the event of pipeline failure. Intelligent pigging facility shall be provided for the entire pipeline system for internal corrosion monitoring. Coating and impressed current cathodic protection system shall be provided to prevent external corrosion.
- xi) The project authorities shall patrol and inspect the pipeline regularly for detection of faults as per OISD guidelines and continuous monitoring of pipeline operation by adopting non-destructive method(s) of testing as envisaged in the EMP. Pearson survey and continuous potential survey shall be carried out at regular intervals to ensure the adequacy of cathodic protection system.
- xii) All the recommendations mentioned in the risk assessment report shall be implemented.

- xiii) All the issues raised during the public hearing/consultation meetings held on 18.04.2014 for Thrissur district, 21.05.2014 for Palakkad district, 22.05.2014 for Kakkannad Koch district shall be satisfactorily implemented.
- xiv) Necessary approvals from Chief Controller of Explosives must be obtained before commission of project. Requisite On-site and Off-site Disaster Management Plans shall be prepared and implemented. It is necessary that integrated DMP should be in place as the pipeline is passing through four Districts.
- xv) The acoustic chambers/barriers should be provided for individual units wherever feasible in the compressor stations.
- xvi) The workers camp should have arrangement for safe drinking water, hygienic kitchen and sanitation facilities. The wastewater should be properly treated before disposal.
- xvii) The company shall obtain all requisite clearances for fire safety and explosives and shall comply with the stipulation made by the respective authorities.
- xviii) Occupational health surveillance of worker shall be done on a regular basis and records maintained as per the Factory Act.
- xix) The Company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the project and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- xx) At least 1 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details should be prepared and submitted to the Ministry's Regional Office at Chennai. Ms/ BPCCL shall utilized the earmarked funds for implementation of sanitation program under Swachh Bharat Abhiyan. Implementation of such program should be ensured accordingly in a time bound manner.

B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the Kerala State Pollution Control Board (KSPCB), State Government and any other statutory authority.
- ii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied.
- iii. The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- iv. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- v. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

- vi. Usage of Personnel Protection Equipments (PPEs) by all employees/ workers shall be ensured.
- vii. The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing relating to the project shall be implemented.
- viii. The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.
- ix. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- x. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xi. The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forest as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- xii. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any, were received while processing the proposal.
- xiii. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the Kerala State Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- xiv. The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- xv. The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at www.moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- xvi. The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.

9.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

10.0 The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.

11.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 alongwith their amendments and rules.

12.0 Environmental Clearance is issued to M/s BPCL for LPG Pipeline (199 Km) from Kochi Refinery to Kerala Border (near Pallakad) at District Ernakulam, Kerala.


(Lalit Bokolia)
Additional Director

Copy to:-

1. Principal Secretary, Department of Environment & Forest, Govt. of Kerala, Secretariat Annex Building, Room - 604, C Block, 6th Floor, Government Secretariat, Thiruvananthapuram.
2. Chairman, Kerala State Pollution Control Board, Pattom P.O., Thiruvananthapuram
3. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
4. The Chief Conservator of Forest, Regional Office (Southern Zone, Bangalore) Kendriya Sadan, 4th Floor, E&F Wing, II Block Koramangala, Bangalore-560034.
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi.
6. Guard File/Record File.


(Lalit Bokolia)
Additional Director